CLAIMS

1. (Currently Amended) A method for continuous production of a hydrate-containing material comprising the steps of:

flowing a hydrate-forming fluid through a pressurized, temperature-controlled, continuous-flow reactor as a continuously flowing fluid;

injecting water into said continuously-flowing hydrate-forming fluid, said water injected as a dispersed fluid at a Reynolds number characterizing the turbulent spraying regime to produce an emulsion of the two fluids; and,

allowing said emulsion to flow through said continuous-flow reactor ~~until a consolidated solid-like hydrate/fluid/water stream is formed~~ for a sufficient time to allow solid gas hydrate particles to form while providing sufficient lateral restraint to consolidate said particles into a substantially solid extruded body.

2. (Previously Presented) The method of claim 1 wherein said pressurized, temperature controlled continuous-flow reactor is a pipe.

3. (Previously Presented) The method of claim 2 wherein said pipe includes static mixer baffles.

4. (Previously Presented) The method of claim 1 wherein said continuous-flow reactor also includes:

means for controlling the flow rate of said hydrate-forming fluid into said continuous-flow reactor;

means for controlling the flow of said water to said hydrate-forming fluid in said continuous-flow reactor;

temperature control means for controlling the temperature of said continuous-flow reactor; and,

a pressure control device for controlling the pressure within said continuous-flow reactor.

5. (Previously Presented) The method of claim 4 wherein said means for controlling the flow rate of said hydrate-forming fluid is a mass flow controller.

6. (Previously Presented) The method of claim 4 wherein said means for controlling the flow rate of said water to said hydrate-forming fluid is a pump equipped with a flow controller.

7. (Previously Presented) The method of claim 4 wherein said means for controlling the flow rate of said water to said hydrate-forming fluid is a jet pump.

8. (Previously Presented) The method of claim 4 wherein said continuous-flow reactor further includes static mixing baffles for mixing said hydrate-forming fluid and said water.

9. (Previously Presented) The method of claim 4 wherein said continuous-flow reactor further includes electrically powered mixing blades for mixing said hydrate-forming fluid and said water.

10. (Currently Amended) The method of claim 1 wherein said hydrate-forming fluid is liquid CO_2 and said ~~consolidated solid-like hydrate/fluid/water stream~~ substantially solid extruded body is a monolithic compact comprising ~~consolidated~~ CO_2-hydrate, / CO_2-liquid, and / water ~~stream~~.

11. (Currently Amended) A method for continuous production of a hydrate-containing material comprising the steps of:

flowing water through a pressurized, temperature controlled, continuous-flow reactor as a continuously flowing fluid;

injecting a hydrate-forming fluid into said continuously flowing water, said hydrate-forming fluid injected as a dispersed fluid at a Reynolds number characterizing the turbulent spraying regime to produce an emulsion of the two fluids; and,

allowing said emulsion to flow through said continuous-flow reactor ~~until a consolidated solid-like hydrate/fluid/water stream is formed~~ for a sufficient time to allow solid gas hydrate particles to form while providing sufficient lateral restraint to consolidate said particles into a substantially solid extruded body.